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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/829,269

Filing Date: April 22, 2004

Appellant(s): EVANS, RICHARD B.

Gerald Glanzman
Reg. # 25,035
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/23/2010 appealing from the Office action mailed 2/01/2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:
Claims 1-3, 6-9 and 25 are currently pending and are rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5,265,508	BELL ET AL.	11-1993
6,813,985	GHARST ET AL.	11-2004
2006/0096434	MOSIEWICZ ET AL.	05-2006
6,152,003	JUNG	11-2000
4,077,290	HREHA	3-1978

5,028,052	MILLER	07-1991
4,060,017	BACKLUND	11-1977
4,920,495	PILKINGTON	04-1990
4,373,412	GERBER ET AL.	02-1983
5,072,640	GREVE ET AL.	12-1991

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

(a) Claims 1, 7-8, and 25 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al. (U.S. Patent 5,265,508), herein referred to as Bell in view of Gharst et al. (U.S. Patent 6,813,985), herein referred to as Gharst and Mosiewicz et al. (U.S. Publication 2006/0096434) and Jung (U.S. Patent 6,152,003) and in still further view of Hreha (U.S. Patent 4,077,290).

Bell discloses a system comprising: an anvil (T-shaped member, 72; Figure 9-10) and a ultrasonic blade (ultrasonic cutting tool, 4), the anvil for providing support to a backed ply material during a cutting operation by the ultrasonic blade (4), the back ply material comprising a ply material and a backing (the material is not being positively claimed) traveling in a first direction(towards the blade), the ultrasonic blade having a cutting profile (blade 46), the ultrasonic blade being operable to travel along a cutting path (along channel 73; see Figs, 3, 5, 7, and 9-10) the cutting path being orientated in a transverse manner relative to the first direction, the anvil comprising: a rigid base

Art Unit: 3724

(bottom of T-shaped member) for securing the anvil to a cutting assembly; an inverted channel (channel 73) in the rigid base and coinciding with the cutting path; an insert (Lexan plastic strip 74) to mate with the channel; a surface (top of insert) on the insert to support the backed ply material, the surface being secured to the base (72).

Bell does not disclose a groove disposed upon the surface and coinciding with the cutting path that is formed in the insert prior to any cutting operation by the ultrasonic blade, and having a curved profile corresponding to a tip portion (46) of the cutting profile, the groove providing support during the cutting operation, wherein a backing of the backed ply material is urged into the groove during the cutting operation.

However, attention is directed to both the Gharst, Jung and Mosiewicz references which disclose cutting operations for cutting partially through a material. Jung discloses the use of both a cutting wheel and an ultrasonic cutting tool that can both be used to cut to a specified depth relative to the material to be cut and also the plastic supporting surface, which is utilized to protect the anvil and blade from contacting. Alternatively, Gharst discloses a cutting wheel to cut through a two ply material, where the blade severs the top layer, yet leaves the backing layer unscathed. Gharst discloses this means is accomplished by utilizing a slitting groove positioned underneath the cutting wheel, which additionally provides for a cleaner cut without damaging the cutting wheel or the anvil by incidental cutting contact. Although Gharst does not disclose that the slitting groove is usable with an ultrasonic cutting tool, as shown by Jung the two types of cutting tools, cutting wheels, and ultrasonic cutters, are both usable to cut a specified depth into a material. Attention is also directed to the

Mosiewicz reference which discloses an ultrasonic cutting tool that utilizes a channel or groove with a width slightly larger than the blade to permit a lower portion of the blade to pass below a bottom surface of the workpiece as the workpiece is being cut (paragraph [0011]). It would have been obvious to one having ordinary skill in the art to have similarly tried utilizing a groove positioned in the anvil of Bell to effect either a partial cut or to protect the Bell ultrasonic cutting blade from contact with the anvil as taught by Gharst and Jung and Mosiewicz. The modified device of Bell still does not disclose that the channel (73) is an inverted "T" shape, nor that the insert is also "T" shaped. Bell does disclose the use of a T-shaped stepped slot 75 for use with a T-shaped stripper bar 77, also shown in Figure 9. Attention is also directed to the Hreha reference that discloses another insert possessing an inverted T-shape that mates with a corresponding inverted -T shaped channel. Hreha discloses that providing inserts of a variety of shapes (see at least Figure 2 and 7) is well known in the art as they allow the insert to be removably secured within the channel. T-shaped inserts unlike rectangular inserts hinder the movement of the insert in the forward direction. It would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the inserts of Bell to comprise a T-shape as taught by both Bell and Hreha as a variety of insert shapes are known in the art to restrict movement and as T-shaped inserts are old and well known in the art for improvements in more secure, yet detachable insert connections.

The limitations of the backing being more flexible than the ply and diverging at an interface between the groove and tip, when the backing is urged into the groove during

cutting operations are a function of the properties of the workpiece and therefore in of themselves do not impart any structural significance and are considered intended use limitations.

In regards to claim 7, the modified device of Bell discloses wherein the insert (74) comprises a polymeric material (Lexan plastic).

In regards to claim 8, the modified device of Bell discloses wherein the polymeric material comprises an ultra high molecular weight polymer (Lexan plastic is a high molecular weight polymer).

In regards to claim 25, the modified device of Jung discloses wherein the groove has a predetermined depth (at least supporting the tip of the blade) and capable of being a function of a thickness and material characteristics of the backed ply material.

(b) Claims 2-3 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al. (U.S. Patent 5,265,508), herein referred to as Bell and in view of Gharst et al. (U.S. Patent 6,813,985), herein referred to as Gharst and Jung (U.S. Patent 6,152,003) and in still further view of Hreha (U.S. Patent 4,077,290), Miller (U.S. Patent 5,028,052), Backlund (U.S. Patent 4,060,017), and also Pilkington (U.S. Patent 4,920,495), Gerber et al. (U.S. Patent 4,373,412) and Greve et al. (U.S. Patent 5,072,640). The modified device of Bell discloses the claimed invention except for the material of the anvil. It is first noted that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re

Leshin, 125 USPQ 416. As applicant claims that the anvil could be a metal, high pressure laminate, polymeric material, or a resin, apparently the material of the anvil is not very critical, in as long as the anvil structure is then capable of providing a solid, supporting surface to interact with the ultrasonic cutter. Furthermore, the use of strong, durable materials, such as metals, plastics, and laminates for anvils in combination with cutters, ultrasonic or otherwise, is old and well known in the art as supported by Backlund, Greve, Pilkington, and Gerber. One having ordinary skill in the art at the time of the invention would have been similarly motivated to have designed the Bell anvil to be comprised of a well known structurally supportive material, as the claimed materials were well known for use in the anvil art and the modification would have yielded nothing more than predictable results of a structurally supportive cutting surface.

(c) Claims 6 and 9 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over Bell et al. (U.S. Patent 5,265,508), herein referred to as Bell in view of in view of Gharst et al. (U.S. Patent 6,813,985), herein referred to as Gharst and Jung (U.S. Patent 6,152,003) and in still further view of Hreha (U.S. Patent 4,077,290) and in further view of Miller (U.S. Patent 5,028,052) and Backlund (U.S. Patent 4,060,017). The modified device of Bell discloses the claimed invention except that insert (74) comprises a high pressure laminate or nylon. It would have been obvious to one having ordinary skill in the art at the time the invention was made to substitute the resilient Lexan plastic for another material such as a HPL or nylon, since it has been held to be within the general skill of a worker in the art to select a known

material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

(10) Response to Argument

The Appellant contends that the Examiner has not met the burden of establishing a *prima facie* case of obviousness based upon the prior art because neither Bell, Gharst, Mosiewicz, Jung or Hreha nor their combination teach or suggest all of the claim limitations. Appellant's arguments fall into two categories (1) that the prior art does not disclose a groove on the surface of the insert that mates with the cutting anvil and (2) that the prior art does not disclose a "T" shaped channel in the base and a "T" shaped insert that mates with the channel.

In regards to the Appellant's first contention that the prior art fails to disclose alone or in combination, a groove on the surface of the insert that mates with the cutting anvil, it is respectfully set forth that the prior art does render obvious these limitations. In combination with Bell and Jung, it was presented that both Mosiewicz and Gharst taught the use of grooved anvils so that the blade could slice through the desired cut product without contacting the bottom of the anvil. Both Mosiewicz and Gharst disclose that the grooves correspond to the blades, and at least Mosiewicz teaches a curved blade tip (54) with a correspondingly curved groove (50). Utilizing a groove on the Bell insert would be a combining of known prior art elements to improve the Bell insert in the same way, such that the Bell anvil blade would avoid contact with the bottom of the anvil and therefore be prevented from breaking or gouging the anvil surface.

The appellant also contends that even if a groove was added to the Bell insert, the prior art still does not disclose "the groove providing support for the backing of the backed ply material during the cutting operation, such that the ply and the relatively more flexible backing of the backed ply material diverge at an interface between the groove and the tip portion of the cutting profile of the ultrasonic blade, and the backing is urged into the groove during the cutting operation, the ultrasonic blade cutting the ply without cutting the backing during the cutting operation." It is first established that the backed ply material is not being claimed, so this entire recitation of interaction with the material is an intended use limitation. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use then it meets the claim language. The Appellant has not established that Bell's insert and ultrasonic cutting blade, modified with a groove, such as taught by Mosiewicz, Gharst and Jung, could not perform this intended function, other than stating that they are not capable of functioning in this manner. The Appellant has not proved that this combination would not or could not function as claimed. See MPEP 2112. The Appellant has not established that given the intended work piece of the invention or at least a workpiece as set forth in the claims, that the prior art as modified couldn't perform the claimed function. The claim limitations also do not distinguish that it isn't some special property of the workpiece that allows for the performance of this intended use recitation such that that a groove and

ultrasonic blade combination such as taught by Mosiewicz and Gharst would be capable of performing this cutting operation.

Applicant has also not shown that the specific curved profile of the tip that corresponds to the profile of the groove is a critical aspect of the invention. As set forth in applicant's original disclosure (see specification paragraph [0030]) the blade is capable of being used in two orientations, one to produce a butt cut in the material and one to produce a slitting operation. In both instances the same groove is utilized, and the separation between the ply and backing is achieved. However, as shown in Figure 3, when the tip is oriented for the butt cut, the separation is still achieved, yet the two profiles have no corresponding engagements. It is therefore shown by the applicant's disclosure that the shape of the groove corresponding to the tip is not a critical aspect of the invention as the same result can be achieved when the tip and groove do not correspond. Furthermore, Bell teaches the use of a Lexan plastic strip as the insert, as well known in the art, these plastic inserts are used to provide a soft engagement surface for the blade, so that the blade can slice through the entire workpiece without marring either the blade or the work surface. Similarly removing that material beneath the blade that is impacted during the cutting would be an obvious combining of prior art elements to yield predictable results, especially as taught by Mosiewicz and Gharst to provide a groove beneath the blade.

The claim limitations have also been set forth that it can be interpreted that it is solely the material properties of the backed ply material that allow for the separation between the ply and backing due to the material bonding. In setting forth this

interpretation, that given a superficial bonding of the two materials, such that there is puckering between them, such that there could be a diverging of the materials over the groove. In this construction, the prior art would structurally anticipate the claim language and be capable of performing the intended function of cutting the ply without cutting the backing. Especially in considering the teachings of Gharst to raise and lower the blade to establish an optimum height that allow for the blade to cut the ply without cutting the backing during the cutting operation.

Even providing for that it is more than the workpiece that allows for this intended use cutting operation of separating the ply from the backing to cut only the ply, and that it is the combination of the blade, groove, and material that allows for this operation, the material is still not claimed, and the Appellant has not established that the prior art wouldn't be capable of performing the claimed intended use limitations. The Appellant has not structurally distinguished their invention over the prior art, nor shown why the prior art is not capable of performing the claimed intended use recitations. Although the prior art may not recognize these intended features, that is not enough to establish that they wouldn't be inherently capable of performing the claimed recitations. See MPEP 2112. The Examiner has thus met the requirements for establishing a *prima facie* case of obviousness for the Appellant's first contention. The Examiner has shown that there is some suggestion or motivation to combine reference teachings, that there is a reasonable expectation of success and that as combined the prior art teaches all of the claim limitations. (MPEP 2143).

In regards to Appellant's second contention that the prior art fails to teach a "T" shaped insert that mates with a "T" shaped channel, it is noted that this difference in the prior art is on its face a change of shape of the insert, as Bell's insert (74) is rectangular. Appellant acknowledges that Bell already discloses a T-shaped stripper bar 77 (Fig. 9), on the anvil, and since the plastic strip insert 74 (Fig. 9) was not also designed in a T-shape, that this modification must not be obvious. This is not a convincing argument. Bell clearly teaches that T-shaped anvil inserts are known, and whether or not Bell chose to employ the T-shape in their insert design 74 design is immaterial as to whether or not it would have been obvious to do so. Hreha, although in another field of endeavor, was referenced as further support that many different shaped anvil inserts are known in the art, and that these varying "T" shapes aid in more firmly securing the insert in the anvil regardless of the inserts purpose. By the cross-sectional shape, the insert can be secured in the anvil without requiring additional securing means, yet can also still be easily removed. This structural change has obvious advantages over a rectangular channel and insert and is obviously applicable to a variety of platforms and is not restricted to the limited application of a radial arm saw table and/or an ultrasonic cutting blade. The difference between the prior art and the instant invention concerning a "T" shaped insert and channel is not novel or unobvious as the claimed shape is already established in the prior art for the same purpose as shown by Appellant's invention. Appellant has not claimed anything new, and the modification of the insert from rectangular to "T" shaped is well established in the prior art. This modification of Bell's insert and the mating channel from a rectangular to a T-shaped cross-section

would also involve the use of a known shape change for the identical structural improvement as taught by both Bell and Hreha. Thus as the use of "T" shaped inserts and their mating channels and are well established in the prior art, and their benefits are widely known, the Examiner has thus unequivocally set forth the three basic criteria for establishing a *prima facie* case of obvious where the prior art has taught all of the claim limitations. The Examiner has shown that there is some suggestion or motivation to combine reference teachings, that there is a reasonable expectation of success and that as combined the prior art teaches all of the claim limitations. (MPEP 2143).

In regards to the rejection of claim 25, it is first pointed out the statement, "In regards to claim 25, the modified device of Jung discloses..." was a clear typographical error. Instead, the statement should have read "In regards to claim 25, the modified device of Bell discloses..." As claim 25, was rejected under the same heading as claims 1, 7 and 8, which all recited the appropriate heading, in regards to Bell, it should have been clear that was an unintended typographical mistake on the part of the Examiner. In addressing the Appellant's comments in regards to Bell and not Jung, the Appellant first contends that the Examiner has not provided any support for their contention that the groove is "capable of being a function of a thickness and material characteristic of the backed ply material." In totality, claim 25 reads, "wherein the groove has a predetermined depth, the predetermined depth being a function of a thickness and material characteristics of the backed ply material." This claim does not impart any significant meaning. It recites that the depth of the groove is a function of an unknown, unclaimed element. That is why it is the Examiner's position, as the material

is not being claimed, that the groove as established by the rejection of Bell in view of Gharst, Mosiewicz, and Jung, could be any depth and still anticipate the claim limitations. The backed ply material could be of any thickness and of any material characteristics and the groove could still be said to be a function of those properties. Alternatively, the workpiece could be modified or designed until the apparatus was shown capable of performing the intended function. Thus as the Appellant has not claimed the backed ply material, nor shown that the groove of the prior art could not perform the intended procedure even given the Appellant's backed ply material or another backed ply material meeting the claimed description, the Examiner has established a *prima facie* case of obvious where the prior art has taught all of the claim limitations. The Examiner has shown that there is some suggestion or motivation to combine reference teachings, that there is a reasonable expectation of success and that as combined the prior art teaches all of the claim limitations. (MPEP 2143).

In regards to the rejections of claims 2-3 and 6, 9, the Appellant has not provided any substantial arguments for the Examiner to rebut. The Appellant has addressed them as not curing the deficiencies of the independent claim 1. As the limitations of claims 2-3, and 6, 9 are further limiting to the material properties of the anvil, the rejections of claims 2-3, 6 and 9 were not recited to defend the Examiner's position of the independent claim, but to address the new limitations set forth in the respective dependent claims. As the Appellant has not provided any arguments as to the appropriateness of these rejections, the Examiner has no counter position to set forth.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Laura M Lee/

Examiner, Art Unit 3724

8/26/2010

Conferees:

/Boyer D. Ashley/

Supervisory Patent Examiner, Art Unit 3724

/Greg Vidovich/

TQAS, TC 3700